L. Snow

Estero Municipal Improvement District (EMID)
Serving City of Foster City/Part of City of San Mateo

2005 URBAN WATER MANAGEMENT PLAN
Final

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Section 1
Agency Coordination

Public Participation

Estero Municipal Improvement District (EMID) has encouraged community participation in its Urban Water Management Planning efforts. For this update of the Urban Water Management Plan (UWMP), a public meeting was held to solicit public's input prior to adoption by the EMID Board of Directors. Public notices were published in the local newspapers. The public was invited to attend the District Board meeting and was encouraged to comment on the plan. Copies of the draft plan were available at the District offices for public review. Appendix A is the EMID Resolution which formally adopted the UWMP.

Description of BAWSCA and Its Role

EMID is a member of the Bay Area Water Supply Conservation Agency (BAWSCA). BAWSCA is a group of agencies and cities in the San Francisco Bay Area who share a common interest of purchasing water from San Francisco Public Utilities Commission (SFPUC). For this update, BAWSCA plays an important role of preparing common language to maintain consistency for its member agencies.

BAWSCA was created on May 27, 2003 to represent the interests of 26 cities and water districts, and two private utilities, in Alameda, Santa Clara and San Mateo counties that purchase water on a wholesale basis from the San Francisco Regional Water System.

BAWSCA is the only entity having the authority to directly represent the needs of the cities, water districts and private utilities (wholesale customers) that depend on the regional water system. BAWSCA provides the ability for the customers of the regional system to work with San Francisco on an equal basis to ensure the water system gets fixed, and to collectively and efficiently meet local responsibilities.

BAWSCA has the authority to coordinate water conservation, supply and recycling activities for its agencies; acquire water and make it available to other agencies on a wholesale basis; finance projects, including improvements to the regional water system; and build facilities jointly with other local public agencies or on its own to carry out the agency's purposes.

Compliance with the Urban Water Management Planning Act lies with each agency that delivers water to its customers. In this instance the responsibility for completing an UWMP lies with the individual BAWSCA member agencies. BAWSCA's role in the development of the 2005 UWMP updates is to work closely with its member agencies and the SFPUC to maintain consistency between the multiple documents being developed and to ensure overall consistency with the Water Supply Improvement Program (WSIP) and the associated environmental documents.

Coordination with Other Agencies

Table 1 summarizes the effort that EMID has made to inform the public and other water agencies regarding this update of the UWMP. A copy of the draft UWMP and Notice of Intention to Adopt were sent to all agencies listed in the table.

Table 1
Coordination with Appropriate Agencies

Entities	Contacted for Assistance	Sent Copy of Draft	Sent Notice of Intention to Adopt	Received Comments
SFPUC	✓	✓	✓	
BAWSCA	✓	✓	✓	✓
General Public	Published Meeting Notice	Available for Review	Published Meeting Notice	
San Mateo County		✓	✓	
City of San Mateo		✓	✓	
Mid Peninsula Water Agency		✓	✓	
California Water Service		✓	✓	

Section 2
Contents of UWMP

Service Area Information with 25 Year Population Projections

EMID, serving a population of approximately 37,500 is located midway between San Francisco and San Jose. It is ten miles south of San Francisco International Airport and adjacent to the entrance of the San Mateo/Hayward Bridge. The service area of EMID consists of the City of Foster City and the Mariner's Island area of the City of San Mateo (See Figure 1). The majority of customers are residential users with a broad cross-section of offices, commercial businesses, and a small number of industrial businesses. EMID currently has one main source of water supply line, i.e., a 24-inch line connected to, Crystal Springs No. 2, SFPUC's 54-inch line. The connection point is located in the City of San Mateo on Crystal Springs Road. EMID currently owns and operate four water storage tanks, three with four (4) million gallons of storage capacity and one newly constructed one with eight (8) million gallons of storage capacity for a total of twenty (20) million gallons of storage. The new 8 million gallon storage tank was put into service in October 2005.

A massive construction operation was necessary to convert the land to a new city. Approximately eighteen million cubic yards of fill were necessary to provide gradient for the storm water runoff and cover for the utility lines as well as support for the buildings. Two hundred and twelve (212) acres of lagoons were created for collection of storm water which is pumped into the San Francisco Bay. To pay for these large front end costs and to operate the community during the early years prior to incorporation or annexation, the State created the EMID. The legislation provided for a turnover of control to the residents as they began occupying the city. By 1971, there were more than 10,000 residents, and they voted for incorporation as a city. Since then, public facilities, commercial development, and new homes have continued to be developed. Today, the City of Foster City is at approximately 99 percent build-out. At 100 percent buildout, the population serves by EMID (City of Foster City and part of San Mateo) is expected to be approximately 41,000.

Table 2 shows the projected population within EMID service area from 2005 to 2030 in five (5) year increments. The information is contained in the DSS Model prepared by Maddaus Water Management for BAWSCA. As the population increased, the demand for water also increased. The population has been increasing steadily since 1971 when the city was incorporated.

Table 2
Current and Projected Population

	2005	2010	2015	2020	2025	2030
Service Area Population	37,424	38,424	39,424	40,290	40,578	40,866

Table 3 shows EMID's water purchases from 1994 to 2004. The first row is in units (1 unit = 748 gallons) and the second row is in acre/feet (1 AF = 325,851 gallons).

Table 3
Amount of Water Purchases from SFPUC during 1994 to 2004
(in Units and in Acre/Feet)

1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
2,373,827	2,448,053	2,556,067	2,758,362	2,557,951	2,717,973	2,775,419	2,828,678	2,680,119	2,574,271	2,704,052
5,449	5,620	5,868	6,332	5,872	6,239	6,371	6,493	6,152	5,909	6,207

Water Treatment and Distribution Facilities

EMID delivers potable water supplies through its distribution system at 40 to 60 psi. EMID purchases 100% of the water from SFPUC. SFPUC treats its water to meet all drinking water standards. There are two (2) water pressure reducing stations along the transmission main that reduce the SFPUC water pressure from 120 psi to the operating range of 40 to 60 psi. EMID has only one pressure zone and there is adequate head pressure from SFPUC supply to distribute water directly into the distribution system without pumping.

EMID has four (4) above ground water storage tanks with a total capacity of 20 million gallons for emergencies and peak demand. A booster pump station is used to pump water from the storage tanks into the distribution system. The booster pump station has two (2) electrical pumps and three (3) engine drive pumps. The engine drive pumps are powered by natural gas with propane backup.

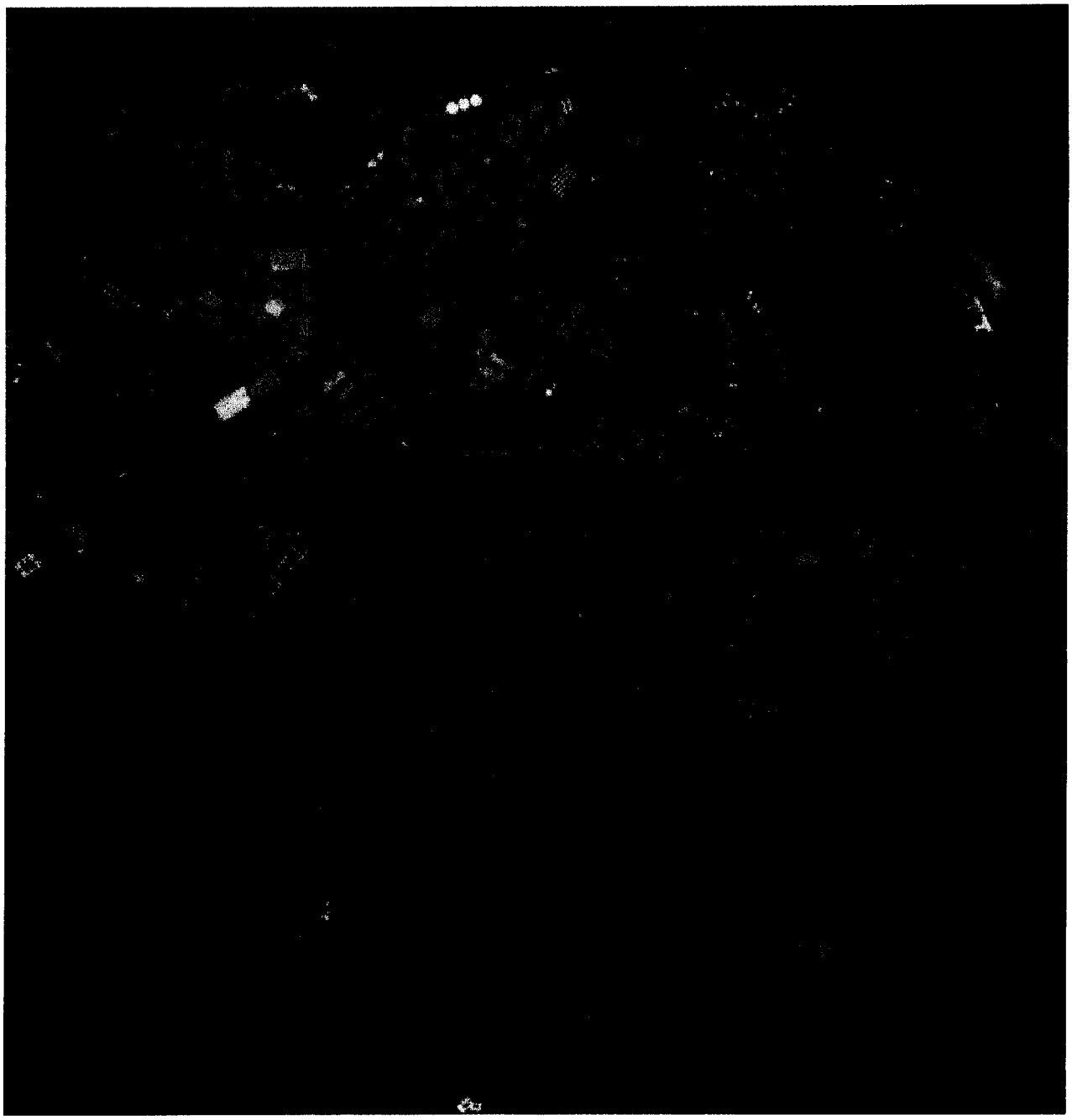
Climate

The climate in the area served by EMID is mostly sunny. The average temperature for the year is around 60 degrees Fahrenheit. Average rainfall is less than 19 inches per year with the greatest rainfall occurring generally in December and January. Wind is generally from the north-west with the mean hourly velocity of 10 miles per hour. Table 4 shows the average rainfalls and temperatures for the EMID service area taken from the Western Regional Climate Center website.

Table 4
Climate Data for Foster City

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual
Average Rainfall (inches)	4.37	2.65	2.47	1.49	0.40	0.11	0.05	0.06	0.18	0.98	2.49	3.52	18.77
Average Temperature Fahrenheit	48.40	51.70	54.40	57.80	61.50	65.70	68.00	67.8	65.90	60.90	53.10	48.00	58.60

Figure 1
Arial View of EMID Service Area



Description of Water Supply From SFPUC

EMID receives water from the City and County of San Francisco's regional system, operated by the SFPUC. This supply is predominantly from the Sierra Nevada, delivered through the Hetch Hetchy aqueducts, but also includes treated water produced by the SFPUC from its local watersheds and facilities in Alameda and San Mateo Counties.

The amount of imported water available to the SFPUC's retail and wholesale customers is constrained by hydrology, physical facilities, and the institutional parameters that allocate the water supply of the Tuolumne River. Due to these constraints, the SFPUC is very dependent on reservoir storage for its water supplies. The SFPUC serves its retail and wholesale water demands with an integrated operation of local Bay Area water production and imported water from Hetch Hetchy. In practice, the local watershed facilities are operated to capture local runoff.

EMID purchases all water supplies to its customers from SFPUC. During normal rainfall years, SFPUC has been able to meet EMID's demand. As a water retailer, EMID has no direct control over its water supply.

Table 5 shows the annual water supply projections in acres/feet per year (AF/Y) allocated to EMID until the year 2030. This information is contained in the DSS Water Model prepared by Maddaus Water Management developed for BAWSCA.

Table 5
Current and Planned Water Supplies

Water Supply Sources	2005	2010	2015	2020	2025	2030
SFPUC (AF/Y)	6,250	6,945	7,057	7,281	7,505	7,616

Ground Water

The service area for EMID is not within an area of usable ground water. Consequently, the plan does not consider any use of ground water to supplement the SFPUC supply.

Reliability of Supply

Explanation of Water Master Contract & Implications for Long Term Supply Reliability

The business relationship between the SFPUC and its wholesale customers is largely defined by the "Settlement Agreement and Master Water Sales Contract (Master Contract)" executed in 1984. The Master Contract primarily addresses the rate-making methodology used by the City in setting wholesale water rates for its wholesale customers in addition to addressing water supply and water shortages for the regional water system. The contract expires on June 30, 2009.

In terms of water supply, the Master Contract provides for a 184 million gallon per day (mgd, expressed on an annual average basis) "Supply Assurance" to the SFPUC's wholesale customers subject to reduction in the event of drought, water shortage, earthquake, other acts of God, or rehabilitation and maintenance of the system. The Master Contract does not guarantee that SFPUC will meet peak daily or hourly customer demands when their annual usage exceeds the Supply Assurance. The SFPUC's wholesale

customers have agreed to the allocation of the 184 mgd Supply Assurance among themselves, with each entity's share of the Supply Assurance set forth on a schedule adopted in 1993. This Supply Assurance survives the termination of the Master Contract in 2009.

The SFPUC can meet the water demands of its retail and wholesale customers in wet and normal years. The Master Contract allows the SFPUC to reduce water deliveries during droughts, emergencies, and for scheduled maintenance activities. The Interim Water Shortage Allocation Plan (IWSAP) between the SFPUC and its wholesale customers adopted in 2000 provides that the SFPUC determines the available water supply in drought years for shortages of up to 20% on an average, system-wide basis.

Table 6 shows the annual projected water supply in acres/feet per year from SFPUC to BAWSCA agencies. It also shows projected water deliveries to EMID for a single critical dry year and during three (3) consecutive dry years, based on the 2005.

Table 6
Projected EMID Deliveries for Three Multiple Dry Years (AF/Y)

	2005	One Critical Dry Year	Year 1	Year 2	Year 3
BAWSCA Allocation	199,273	176,310	176,310	155,474	155,475
EMID Allocation	6,250	6,059	6,059	5,264	5,264

Shortage Allocation Plan

The SFPUC can meet the demands of its retail and wholesale customers in years of average and above-average precipitation. The Master Contract allows the SFPUC to reduce water deliveries to wholesale customers during periods of water shortage. Under the Master Contract, reductions to wholesale customers are to be based on each agency's proportional purchases of water from the SFPUC during the year immediately preceding the onset of shortage, unless this formula is supplanted by a water conservation plan agreed to by all parties.

The Master Contract's default formula discouraged SFPUC's wholesale customers from reducing purchases from SFPUC during periods of normal water supply through demand management programs or development of alternative supplies. To overcome this problem, SFPUC and its wholesale customers adopted an Interim Water Shortage Allocation Plan (IWSAP) in calendar 2000. This IWSAP applies to water shortages up to 20% on a system-wide basis and will remain in effect through June 2009.

The IWSAP has two components. The Tier One component of the IWSAP allocates water between San Francisco and the wholesale customer agencies collectively. The IWSAP distributes water between two customer classes based on the level of shortage:

Level of System Wide Reduction in Water Use Required	Share of Available Water	
	SFPUC Share	Suburban Purchasers Share
5% or less	35.5%	64.5%
6% through 10%	36.0%	64.0%
11% through 15%	37.0%	63.0%
16% through 20%	37.5%	62.5%

The Tier Two component of the IWSAP allocates the collective wholesale customer share among each of the 28 wholesale customers. This allocation is based on a formula that takes three factors into account, the first two of which are fixed: (1) each agency's Supply Assurance from SFPUC, with certain exceptions, and (2) each agency's purchases from SFPUC during the three years preceding adoption of the Plan. The third factor is the agency's rolling average of purchases of water from SFPUC during the three years immediately preceding the onset of shortage.

The IWSAP allows for voluntary transfers of shortage allocations between SFPUC and any wholesale customer and between wholesale customer agencies. Also, water "banked" by a wholesale customer, through reductions in usage greater than required, may also be transferred.

The IWSAP will expire in June 2009 unless extended by San Francisco and the wholesale customers. The projected amount of water which EMID expects to receive from SFPUC during dry years after 2010 has been calculated by SFPUC on the assumption that the Plan will in fact be extended.

Supply Assurance

EMID receives water from SFPUC. This supply is predominantly from the Sierra Nevada, delivered through the Hetch Hetchy aqueducts, but also includes treated water produced by the SFPUC from its local facilities in Alameda and San Mateo Counties.

In 1984 EMID, along with 29 other Bay Area water suppliers signed a Settlement Agreement and Master Water Sales Contract (Master Contract) with San Francisco, supplemented by an individual Water Supply Contract. These contracts, which expire in June 2009, provide for a 184 million gallon a day (mgd, expressed on an annual average basis) Supply Assurance to the SFPUC's wholesale customers collectively. EMID individual Supply Assurance is 5.58 mgd (or approximately 6,250 acre feet per year) for 2005. Although the Master Contract and accompanying Water Supply Contract expire in 2009, the Supply Assurance (which quantified San Francisco's obligation to supply water to its individual wholesale customers) survives their expiration and continues indefinitely.

The SFPUC can meet the demands of its retail and wholesale customers in years of average and above average precipitation. The Master Contract allows the SFPUC to

reduce water deliveries during droughts, emergencies and for scheduled maintenance activities. The SFPUC and all wholesale customers adopted an Interim Water Shortage Allocation Plan in 2000 to address the allocation of water between San Francisco and wholesale customers in aggregate and among individual wholesale customers during water shortages of up to 20% of system-wide use.

Regional Coordination on Demand Management

BAWSCA and its member agencies look for opportunities to work with other water agencies, including the SFPUC and Santa Clara Valley Water District (SCVWD), and leverage available resources in implementing water use efficiency projects. For example, in 2005, the SFPUC and BAWSCA entered into a Memorandum of Understanding (MOU) regarding the administration of a Spray Valve Installation Program. Through this MOU, SFPUC and BAWSCA will work cooperatively to offer and coordinate installation of water conserving spray valves to food service providers in BAWSCA member service areas. Recently the Bay Area Efficient Clothes Washer Rebate Program, a single rebate program offered by all major water agencies in the greater Bay Area including BAWSCA and the SFPUC, was recipient of $1.5M in Proposition 50 grant funds for implementation as early as FY 2006/2007.

BAWSCA and its member agencies will continue to look to partner with other agencies to develop regional water conservation efforts that look beyond local issues of supply and cost-effectiveness to examine costs, benefits and other related issues on a system-wide level. The goal is to maximize the efficient use of water regionally by capitalizing on variations in local conditions and economies of scale.

Water Use by Customer Type - Past, Current, and Future

Population growth is expected to be minimal since land development within EMID is approximately 99 percent complete. At buildout, the population is estimated to be 41,000 (based on the Foster City Census data and assumed occupancy of residential units in the Mariner's Island portion of San Mateo).

Table 8 shows projections of water consumption by customer types, including un-accounted for water (system loss), from 2000 to 2030. Un-accounted for water is expected to remain around 5% of the total water purchase. All accounts within EMID are metered. There are no agricultural accounts within EMID service area.

Table 7
Water Use by Customer-Type

Year	Water Use Sectors	Single Family	Multi - Family	Commercial/ Institutional	Industrial	Landscape Irrigation	Un-counte	Totals
2000	# of Accounts	4,660	2,744	226	70	481		8,181
	Deliveries AF/Y	1,679	2,159	564	142	1,575	261	6,380
2005	# of Accounts	4,698	2,713	215	68	488		8,182
	Deliveries AF/Y	1,700	2,068	510	86	1,575	312	6,250
2010	# of Accounts	4,698	2,885	241	74	523		8,421
	Deliveries AF/Y	1,813	2,347	538	153	1,743	351	6,945
2015	# of Accounts	4698	2,944	241	77	547		8,507
	Deliveries AF/Y	1,834	2,359	527	158	1,828	351	7,057
2020	# of Accounts	4,698	3,066	241	81	578		8,664
	Deliveries AF/Y	1,907	2,395	518	165	1,932	364	7,281
2025	# of Accounts	4,698	3,066	241	85	606		8,696
	Deliveries AF/Y	1,948	2,473	510	173	2,026	375	7,505
2030	# of Accounts	4,698	3,125	241	89	635		8,788
	Deliveries AF/Y	1,958	2,489	504	180	2,105	380	7,616

Sales to Other Agencies

EMID is a retailer and does not sell water to other water agencies.

Transfer and Exchange Opportunities

EMID has a 12-inch connection to California Water Service Company which serves the City of San Mateo and a 12-inch connection to Mid Peninsula Water Agency (formerly called Belmont County Water District) which serves the City of Belmont, San Carlos, and part of Redwood City. EMID has agreements with both agencies that allow EMID to use these connections during emergency situations as shown in Table 7.

Table 8
Transfer and Exchange Opportunities

Source Transfer Agency	Transfer or Exchange	Short Term Only (Emergency)
Mid Peninsula Water Agency	✓	✓
California Water Service Company	✓	✓

Section 3
Determination of Demand Management Measures (DMM) Implementations

DMM 1 – Water Survey Programs for Single-Family and Multi-Family Residential Customers

Implementation Description: Residential customer surveys have been done on an informal basis by the customer or by the water department following a high water bill complaint. EMID will continue to seek out ways to inform the public about water surveys.

DMM 2 – Residential Plumbing Retrofit

Implementation Description: Water conservation information kits are available to EMID's customers and periodically, information is distributed via customer utility bills. In addition, EMID gives away, free of charge, shut off nozzles for home plumbing fixtures and garden hoses, low-flow shower heads, low-flow sink aerators, and "mini-flush" toilet retrofit devices.

DMM 3 – System Water Audits, Leak Detection and Repair

Implementation Description: Recent data shows EMID's unaccounted for water at approximately 5 percent. All water delivered to EMID is recorded on two master meters connected to the SFPUC line. Meters are read daily. All water distributed by EMID to its customers is metered, with the exception of water used from fire hydrants. Water from fire hydrants is used for fire hydrant flushing and fire fighting and training. These activities account for a small portion of the "unaccounted" for water. The Utility Billing Software program enables EMID to log water use data and history of each service on a computer. Data for each service includes an account number, address, land use, meter size and charges along with the water usage. EMID has purchased the necessary equipment for leak detection. Equipment is utilized to pinpoint leaks and repairs are performed immediately. As part of an ongoing effort to improve the water system, EMID is allocating $300,000 every other year in their Five-Year Capital Improvement Project Plan to replace leaky or malfunctioning valves. By replacing leaky valves, system losses are reduced.

DMM 4 – Metering with Commodity Rates

Implementation Description: Approximately 8,200 metered accounts are in EMID's service area. Every account within EMID is metered. During normal supply years, EMID has adopted a uniform rate structure. However, during water shortage situations, EMID could adopt a graduating scale for excess use charges as those proposed by SFPUC. As the percent of water use over the allotment increases, so will the excess use charge.

DMM 5 – Large Landscape Conservation Programs and Incentives

Implementation Description: Major portion of water consumption within EMID comes from outdoor landscaping of residential and commercial accounts. The most effective approach to educating the community about water conservation is through literature. EMID has prepared a booklet called "Planting and Irrigation Guidelines" to assist developers, property owners, and homeowners in selecting appropriate plant materials and installing

irrigation systems to create water conserving landscapes which are appropriate to Foster City soil and climate conditions (Appendix H). This booklet is available to the public at various locations throughout the City. Water conservation material is also distributed at the Foster City's annual Arts and Wine festival.

DMM 6 – High-Efficiency Washing Machine Rebate Programs

Implementation Description: This program has been ongoing since 2000. Since program inception, over 625 rebates totaling $55,000 were given out for replacing old clothes washers with new ENERGY STAR water conserving units.

DMM 7 – Public Information Programs

Implementation Description: Water conservation information is posted on the City of Foster City website. Public information is also distributed at City sponsored events. Planting and Irrigation Guidelines booklet, designed to aid landscape professionals select appropriate plant materials and irrigation systems suitable for EMID soil and climate is available to all customers.

DMM 8 – School Education Programs

Implementation Description: EMID in the past have worked with local schools and teachers to promote water conservation and will continue to do so. Presentation of the water system and tours of the local water facilities are part of planned activities for school kids and teachers during the annual Public Works week.

DMM 9 – Conservation Programs for Commercial, Industrial, and Institutional Accounts

Implementation Description: EMID does not specifically target water conservation programs for this group. However, water saving kits and devices that are available to residential customers are also available to this sector.

DMM 10 – Wholesale Agency Programs

Implementation Description: EMID is a retailer, not a wholesaler and therefore this Demand Management Measure is not applicable.

DMM 11 – Conservation Pricing

Implementation Description: EMID currently does not have conservation pricing in their rate structure. It could easily be implemented during drought or other emergencies, as it was implemented during the 1987 to 1992 drought.

DMM 12 – Water Conservation Coordinator

Implementation Description: EMID does not have a Water Conservation Coordinator classification position; however, several staff members coordinate the different functions of this position. EMID works with BAWSCA on different water conservation programs and staff participates on the Water Resources Subcommittee. One of the functions of this committee is to review and administer different water conservation programs.

DMM 13 – Water Waste Prohibition
Implementation Description: Following excerpt is from EMID's Municipal Code. Any violation of the code is enforced by the City's code enforcement division.

"No customer shall knowingly permit leaks or waste of water. Where water is wastefully or negligently used on a customer's premises, seriously affecting the general service, the district may discontinue the service if such conditions are not corrected within the time specified in the written notice." (Ord. 46 § 74, 1971)

DMM 14– Residential Ultra-Low Flush Toilet Replacement Programs
Implementation Description: This is an ongoing program since 1990. Under the program, customers receive rebates for the installation of ultra-low flow (ULF) toilets. ULF toilets are toilets that use 1.6 gallons or less of water per flush. A single family residential unit can receive up to $150 or 50% of the total labor and material cost, whichever is less, per toilet. A maximum of three toilets per household can be retrofitted with ULF toilets. Since 1990, over 2,700 ULF toilet rebates have been processed and approximately $330,000 has been reimbursed.

In addition, current regulations to install ULF toilets in all new constructions are enforced. Requirements to install ULF toilets are incorporated during the development review process and installations are inspected prior to issuing occupancy.

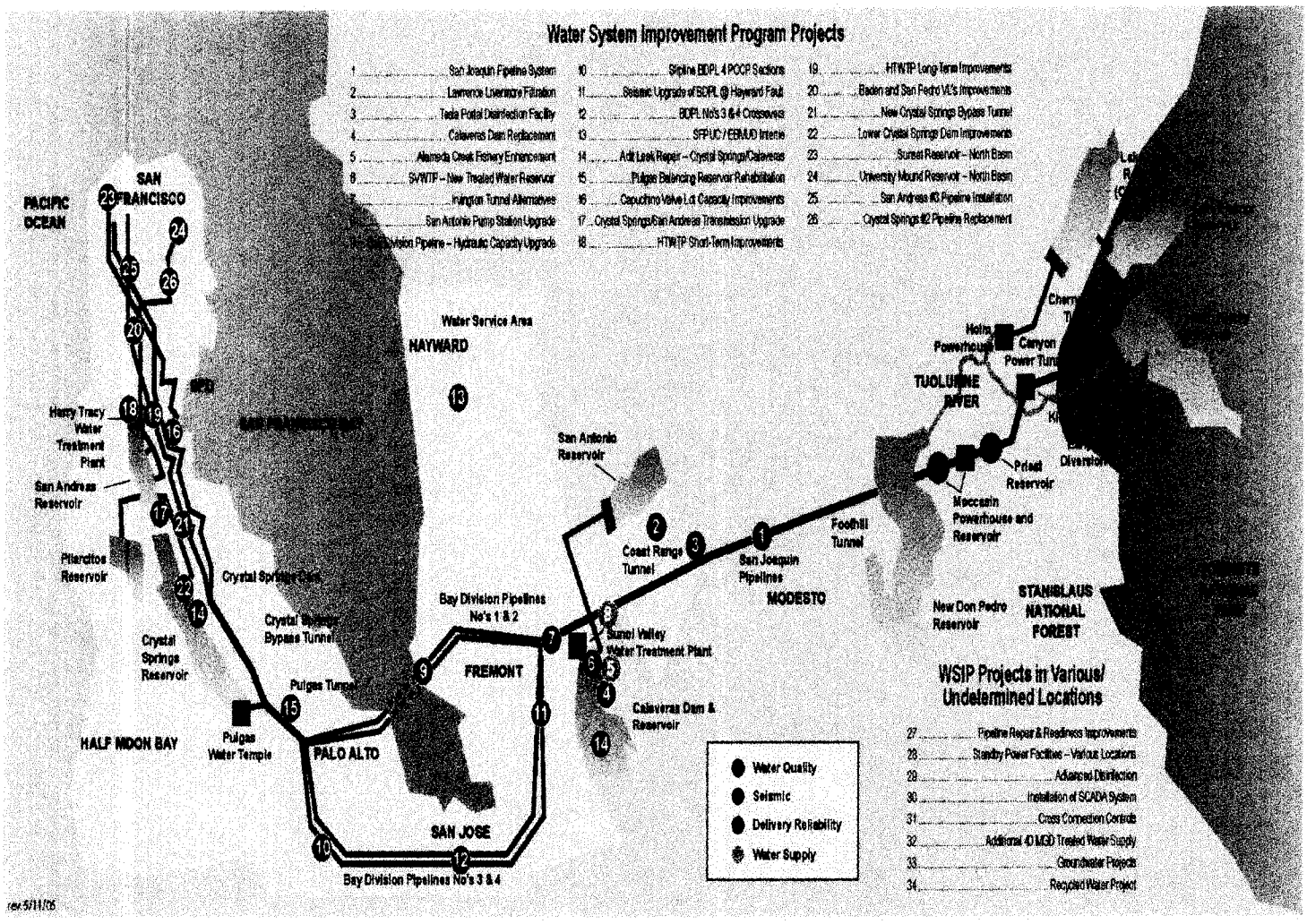
Planned Water Supply Projects and Programs

Water Supply Improvement Program (WSIP)

In order to enhance the ability of the SFPUC water supply system to meet identified service goals for water quality, seismic reliability, delivery reliability, and water supply, the SFPUC is undertaking a Water System Improvement Program (WSIP). The WSIP will deliver capital improvements aimed at enhancing the SFPUC's ability to meet its water service mission of providing high quality water to its customers in a reliable, affordable, and environmentally sustainable manner.

The origins of the WSIP are rooted in the "Water Supply Master Plan" (April 2000). Planning efforts for the WSIP gained momentum in 2002 with the passage of San Francisco ballot measures Propositions A and E, which approved the financing for the water system improvements. Also in 2002, Governor Davis approved Assembly Bill No. 1823, the Wholesale Regional Water System Security and Reliability Act. The WSIP is expected to be completed in 2016. Figure 2 on the next page indicates the locations of the various capital improvement projects which comprise the WSIP.

Figure 2
SFPUC Capital Improvement Projects



Program Environmental Impact Report (PEIR)

A Program Environmental Impact Report (PEIR) is being prepared under the California Environmental Quality Act (CEQA) for the Water Supply Improvement Program. A PEIR is a special kind of Environmental Impact Report under CEQA that is prepared for an agency program or series of actions that can be characterized as one large project. PEIRs generally analyze broad environmental effects of the program with the acknowledgment that site-specific environmental review may be required at a later date.

Projects included in the WSIP will undergo individual project specific environmental review as required. Under CEQA, project specific environmental review would result in preparation of a Categorical Exemption, Negative Declaration or Environmental Impact Report. Each

project will also be reviewed for compliance with the National Environmental Policy Act and local, state and federal permitting requirements as necessary.

Development of Desalinated Water

EMID has investigated the possibility of constructing a desalination plant in order to augment its supply from SFPUC. Studies have shown that while this option is technically feasible, it is not economically viable. The analysis indicates that with amortization of the capital expense an alternative water supply such as desalination would cost 4 times the current cost of SFPUC water and 2 times the potential future cost of SFPUC Water. Even under a persistent drought such as the one experienced from 1987-1992, EMID customers have been able to cope with the mandatory reductions.

Section 4
Water Shortage Contingency Plan

In 1993, in accordance with the requirements of Assembly Bill 11X, EMID developed a comprehensive water shortage contingency plan. The Water Shortage Contingency Plan is intended to be used as a planning tool to assist in the development of future rationing programs. This plan provides a framework for management of voluntary and mandatory water reduction stages. The plan allows for flexibility to establish more detailed programs once the specifics of a water shortage are known.

Note: Even though this plan was developed in 1993, all or part of this Water Shortage Contingency Plan could be implemented in conjunction with SFPUC's mandate during future water shortage situations.

Rationing Stages and Triggering Levels

Since 1970, there have been two 4- to 5-year droughts. As a water purveyor, EMID must respond to SFPUC's triggering levels for demand reduction at each stage. It is the water storage volume at SFPUC's nine reservoirs that triggers each demand reduction stage. When SFPUC imposes a water rationing program, EMID's strategy has been to respond with the same goals as the program imposed by SFPUC. SFPUC anticipates that with a normal rainfall in 2000/01 season, all nine reservoirs will be lowered to provide space for winter flood inflow.

The Water Shortage Contingency Plan describes the triggering levels and actions to be considered for each stage of a water shortage. The Water Shortage Contingency Plan has three stages with each stage set to respond to increasingly more severe conditions. The third stage will be implemented at such a time that the water supply conditions reach a hydrologic circumstance not previously experienced by the SFPUC. The current plan calls for system wide consumption to be reduced by 45 percent. This is described in more detail in the draft of the San Francisco 2000 UWMP.

Stage I

This stage is a continuing effort to conserve water regardless of water supply. Stage I is in effect even when there is no drought. This stage involves continued efforts to encourage the public not to waste water. This stage also includes the enforcement of current regulations requiring the installation of ultra low flow toilets on new construction. ULF toilet rebate program and water conservation device give away programs are also in effect during this stage.

Stage II

This stage is triggered when the total volume of water storage in SFPUC's reservoirs falls below the two-year water demand base by 5 to 20 percent. The Stage II shortage will result in a mandatory water conservation program with a goal of reducing water use between 10 to 20 percent as dictated by SFPUC and determined necessary by the EMID Board. This stage includes increased public education such as water bill inserts advising customers how to save water. A resolution would be adopted by the EMID Board declaring a water shortage emergency and implementing mandatory water conservation measures in accordance with Chapter 8.60 of the EMID code (Appendix G).

Stage III

Stage III is triggered when the total volume of water storage in SFPUC's reservoirs falls below the two-year water demand base by 20 to 30 percent. This stage of water shortage would result in a mandatory water rationing program with a goal of reducing the water use by 20 to 30 percent as determined necessary. The EMID Board would adopt a resolution declaring a water shortage emergency and implementing mandatory water rationing measures in accordance with Chapter 8.60 of the EMID code. In this and the next stage a larger range of prohibited uses would be considered and a penalty for overuse will be charged as indicated in Rate Structure under Rationing for Excess Water Use as described below in the Rate Structure under Rationing for Excess Water Use paragraph.

Water Allotment Methods

EMID has established the following allocation method for each customer type (classification).

Single Family	Per-Capita with Assumed Occupancy for Inside, Percentage Reduction for Outside
Duplex	Per-Capita with Assumed Occupancy for Inside, Percentage Reduction for Outside
Townhouse/Apartments	Per-Capita with Assumed Occupancy for Inside, Percentage Reduction for Outside
Commercial	Percentage Reduction Inside and Outside
Industrial	Percentage Reduction Inside and Outside
Governmental/Institutional	Percentage Reduction Inside and Outside
Irrigation/Landscaping	Allotment based on square footage of green area

Rate Structure under Rationing for Excess Water Use

EMID has essentially the same graduating scale of excess use charges as those imposed by SFPUC. As the percent of water use over the allotment increases, so does the excess use charge. The following table shows excess use charges established for various stages during water rationing.

Excess Water Consumption		Monetary Penalty
0%	- 5.00% over allotment	No Penalty
5.01%	- 10.00% over allotment	3 X SFPUC Rate
10.01%	- 20.00% over allotment	7 X SFPUC Rate
20.01%	+ over allotment	9 X SFPUC Rate

Actions and Conditions that Impact Revenue (Based on FY 2004/2005 Budget)

Type (Reduced Sales)	Annual Anticipated Revenue Reduction
5%	$163,800
10%	$327,600
15%	$491,400
20%	$655,200
30%	$982,800

Actions and Conditions that Impact Expenditures (Based on FY 2004/2005 Budget)

Category (5% increase)	Anticipated Cost
Increase Staff Cost	$ 65,000
Increased O&M Cost	$137,000
Increased Water Purchase Cost	$142,000

Proposed Measures to Overcome Revenue Impacts

Names of Measures	Summary of Effects
Rate Adjustment (Impose Excess Water Consumption Fee Schedule)	- Reduce consumption. - Penalty collected could partially offset increased expenditures

Mechanism to Determine Reductions in Water Use

Under normal water supply conditions, the amount of potable water purchased from SFPUC is recorded daily. EMID has two master meters that are connected to SFPUC's main line.

For each month during water rationing, a comparison table showing the amount of water purchased versus the amount of water purchased during the same month in 1987, which was the most recent year with normal rainfall, would be prepared, and reported to the District Manager. The table would also compare the amount of water purchased versus the water allotments provided to EMID by SFPUC. If reduction goals are not met, the District Manager would notify the District Board so that corrective action(s) can be taken.

Estimate of Minimum Supply for Next Three Years

EMID recognizes that it is better to enter into a water shortage alert early, to establish necessary rationing programs and policies, to gain public support and participation, and to reduce the overall usage so that the restrictions put on EMID by SFPUC can be met. EMID

feels that the three-year worst case supply projections will result in the same level of rationing that was adopted briefly but not implemented in 1991 as a result of the droughts from 1987-1992.

Table 9 displays the three year estimated minimum water supply to EMID from SFPUC. This information is taken from the DSS Water Model prepared by Maddaus Water Management for BAWSCA.

Table 9
Three-Year Estimated Minimum Water Supply (For Consecutive Three Dry Years)

Source	Normal	Year 1	Year 2	Year 3
SFPUC (AF/Y)	6,250	6,059	5,264	5,264
% of Normal	100	96.94	84.22	84.22

Catastrophic Supply Interruption Plan

Water Shortage Emergency Response

EMID has maintained emergency contingency plans in the event of service interruption from SFPUC. EMID will continue to participate with the emergency planning committees developed by the PUC to identify the procedures and interactions between Agencies for emergency response. EMID will also continue to participate in inter-departmental planning and coordination with the County OES.

Possible Catastrophe Scenarios include:

- Regional Power Outage
- Major Earthquake
- Terrorist attack on the Water Supply

The following summarizes the actions EMID will take during a water supply catastrophe:

- Notification to its customers of the supply catastrophe
- Activate Emergency Operations Center (EOC)
- Follow procedures in the Emergency Response Plan (ERP)

Section 5
Recycled Water Plan

Recycled Water

Recycled water is not presently viable as a potable water supply. Reclaimed water is suitable only for such uses as dust control and landscape irrigation. Currently, the South Bayside System Authority in Redwood City is the only source for acceptable reclaimed water in San Mateo County. The reclaimed water from the San Mateo Water Quality Control Plant (SMRWQCP) meets health standards for irrigation use. Unfortunately, the salt in the water makes it infeasible to use for irrigation unless desalination is accomplished or plants are extremely salt-tolerant.

In addition, there are no pipelines to distribute reclaimed water within EMID. Distribution of reclaimed water by water trucks is an expensive alternative compared to using EMID water. Reclaimed water is an alternative during times when the availability of EMID potable water is severely restricted.

Wastewater Collection System and Treatment Plant

Waste water collection system for EMID consists of more than 51 miles of pipelines and 49 lift stations. Waste water collected is pumped to SMWQCP for treatment. SMWQCP is jointly owned by the City of Foster City and the City of San Mateo.

Wastewater Quantity, Quality, and Current Uses

The average daily wastewater flow (ADWF) collected and pumped to the treatment plant is approximately 3.0 million gallons per day (MGD).

Section 6
Water Quality Impacts on Reliability

Protecting SFPUC'S Water Sources

The SFPUC aggressively protects the natural water sources entrusted to its care. It continuously monitors watershed weather conditions, water turbidity levels, microbial contaminants and aqueduct disinfectant levels. The SFPUC's 2004 annual update of the Watershed Control Program and Sanitary Survey describes the watersheds and water supply system, identifies potential sources of contamination in the watersheds, discusses the existing and recommended watershed management practices that protect water quality, and summarizes the water quality monitoring conducted.

The SFPUC also conducts a sanitary survey for local watersheds every 5 years. The 2000 assessment showed that SFPUC watersheds have very low levels of contaminants, and those contaminants found are associated with wildlife and, to a limited extent, human recreational activity.

The SFPUC is engaged in a number of capital projects as part of its WSIP program which is designed to improve the reliability of its water treatment and delivery system and protect the water from natural or man-made events that could affect water quality. The SFPUC also monitors water quality throughout its system and can re-route or isolate questionable water within its transmission system without major impacts to water deliveries to its customers.

Protecting EMID Water System and Quality

The City of Foster City is constructed around a lagoon system as shown in Figure 1. Water transmission mains across the lagoon are attached to the bridge crossings. At the bridge abutments, where the pipe enters and exits the ground, flexible (EBBA) fittings are installed to allow differential movement during earthquake events.

EMID has its own monitoring program to monitor water quality within our distribution system. Water samples from predetermined locations in the distribution system are collected and tested regularly. Results are recorded and monitored for trends. In the event of water quality episodes, the action plans outlined in the Chloramines Conversion Report, prepared by Carollo Engineering, Inc, in 2003, will be implemented (Appendix J). In addition, EMID's ERP addresses actions it will take to minimize disruptions of water service for our customers during water quality events.

Section 7
Water Service Reliability

EMID water supply is solely provided by the SFPUC. SFPUC does not expect fluctuation in the water quality that will affect supply and demand for the next twenty five years.

Following supply and demand projections were provided to EMID by SFPUC. Table 10 shows normal year water supply and projections for the next 25 years. Since EMID only purchases water from SFPUC, and does not sell water to other agencies, projected supply and demand are the same.

Table 10
Projected Normal Water Year Supply And Demand (AF/Y)

Wholesaler	2010	2015	2020	2025	2030
SFPUC	6,945	7,057	7,281	7,505	7,616
% of Projected Normal	100%	100%	100%	100%	100%

Table 11 shows the projected annual water supply and demand for a single dry year. SFPUC's projections indicate that a 10% overall reduction in supply in anticipated.

Table 11
Projected Single Dry Year Water Supply And Demand (AF/Y)

	2010	2015	2020	2025	2030
Supply/Demand	6,250	6,351	6,552	6,754	6,854
% of projected Normal	90%	90%	90%	90%	90%

Table 12 shows the projected annual water supply and demand for multiple years for five (5) consecutive years from 2006 to 2010. SFPUC is anticipating 10% reductions in the first two (2) years followed by 20% reductions for the next three (3) years. The percent reductions would be the same for any given 5 consecutive dry years.

Table 12
Projected Supply And Demand During Multiple Dry Years from 2006 to 2010 (AF/Y)

	2006	2007	2008	2009	2010
Supply/Demand	5,625	5,625	5,000	5,000	5,000
% of projected Normal	90%	90%	80%	80%	80%

Section 8
Adoption and Implementation of UWMP

Plan Adoption

The Water Code sections 10617 and 10620 state that every urban water supplier with more than 3,000 customers or supplying more than 3,000 acre feet of water annually to its customers shall prepare and adopt the UWMP in accordance with the Urban Water Management Planning Act. EMID falls under both categories and therefore is required to prepare this update. EMID prepared this update in 2005. In accordance with the Urban Water Management Planning Act, it is scheduled to be adopted by the EMID Board of Directors in December 2005. The Act requires EMID to update the UWMP every five (5) years on or before December 31. The previous version of the UWMP was prepared and adopted by the EMID Board of Directors in December 2000.

By preparing this update, EMID is eligible to apply for Department of Water Resources (DWR) administered State grants, loans, and drought assistance when they are available. Once adopted, the UWMP will be submitted to the DWR within 30 days. The UWMP plan contains all information necessary to meet the requirements of the Urban Water Management Planning Act.

Public Participation

EMID has encouraged community participation in various water conservation programs since 1986 when EMID's original UWMP was prepared. Since that time, an intensive conservation effort has been undertaken, especially during the 1987-1992 droughts. Public meetings were held and community input was sought during that drought period.

For this update to the UWMP, a public meeting was held to solicit public input on the plan prior to adoption by the EMID Board. Public notices were published in the local newspapers in accordance with Government Code Section 6066. The public was invited to attend the District Board meeting and was encouraged to comment on the plan. Copies of the draft plan were available at the District offices for public review. Appendix A is the EMID Resolution which formally adopted the plan.

Coordination

EMID is a member of the BAWSCA. BAWSCA is a group of agencies and cities in the San Francisco Bay Area who share a common interest of purchasing water from SFPUC. BAWSCA meets regularly to share information and coordinate water related issues.

Within EMID, water conservation efforts by various departments are coordinated by the EMID District Manager. Various policies for water conservation efforts have been developed by and adopted by the EMID Board of Directors.

Section 9
Appendices

Appendix A EMID Resolution Approving the 2005 UWMP

Appendix B EMID Resolution No. 2365 Approving a Water Shortage Contingency Plan

Appendix C EMID Resolution No. 2190 Establishing a Methodology for Calculating Mandatory Water Rationing Allotments and Creating an Excess Water Use Penalty

Appendix D Projected Water Allocations for a 53% Reduction from 1987

Appendix E Sample Letter to EMID Customers Describing Water Allocation Formula and a List of Unlawful Uses of Water During Mandatory Rationing

Appendix F EMID Water Conservation Incentive Program Literature

Appendix G Chapter 8.60 of EMID Code on Water Conservation and Rationing

Appendix H Planting and Irrigation Guidelines Booklet

Appendix I Chloramines Conversion Report, Prepared by Carollo Engineers

Section 10
References

1. "Community Profile for City of Foster City, August 2000, "Community Development

2. "Community Profile, Technical Appendix for City of Foster City, August 2000", Community Development Department

3. "Community Guide 2000", Foster City Chamber of Commerce

4. "2000 Sample UWMP, December 2000", Department of Water Resources

5. "Setting Urban Water Rates for Efficiency and Conservation, Discussion of Issues, October 1994", California Urban Water Conservation Council

8. "Water Shortage Contingency Plan for Estero Municipal Improvement District (EMID), January 1993", EMID

9. Five Year Capital Improvement Project Plan, FY 2004/2005 to FY 2009/2010

10. Western Regional Climate Center Website

11. DSS Water Model Prepared by Maddaus Water Management, for Bay Area Water Supply Conservation Agency (BAWSCA)

RESOLUTION NO. 2950

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE ESTERO MUNICIPAL IMPROVEMENT DISTRICT APPROVING THE 2005 URBAN WATER MANAGEMENT PLAN (UWMP)

ESTERO MUNICIPAL IMPROVEMENT DISTRICT

WHEREAS, Assembly Bill (AB) 797 (Water Code Section 10610 et seq., known as the Urban Water Management Planning Act enacted by the California Legislature during the 1983-1984 Regular Session, which subsequently has been amended by AB 2661, mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, prepare an UWMP; and

WHEREAS, EMID is an urban supplier of water providing water to over 30,000 customers; and

WHEREAS, EMID updated and adopted an UWMP in November 2000 per District Resolution No. 2747 in compliance with AB 797; and

WHEREAS, to comply with AB 2661, the UWMP is required to be updated every five years; and

WHEREAS, the Plan has been updated and must be adopted by December 31, 2005, and filed with the California Department of Water Resources within thirty days of adoption after public review and hearing; and

WHEREAS, a Notice of Public Hearing was published in the local newspapers for consideration of the 2005 UWMP at the Estero Municipal Improvement Board's meeting of November 21, 2005, on said date the Public Hearing was opened, held and closed.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Estero Municipal Improvement District as follows:

1. The 2005 UWMP is hereby adopted; and

2. The District Manager is directed to file the 2005 UWMP with the California Department of Water Resources within 30 days of adoption of the Plan; and

3. The District Manager is hereby authorized and directed to implement the Water Conservation Programs as set forth in the 2005 UWMP, which include water shortage contingency analysis and recommendations to the EMID Board of Directors regarding necessary procedures, rules, and regulations to carry out effective and equitable water conservation and water recycling programs; and

4. In the event of a water shortage, the District Board is hereby authorized to declare a Water Shortage Emergency according to the Water Shortage Stages and Triggers indicated in the Plan, and implement necessary elements of the Plan.

PASSED AND ADOPTED as a Resolution of the Estero Municipal Improvement District at the regular meeting held on the 21st day of November, 2005, by the following vote:

AYES: Directors Cox, Koelling, Townsend, Wilder, and President Wykoff

NOES: None

ABSENT: None

ABSTAIN: None

Rick Wykoff
RICK WYKOFF, PRESIDENT

ATTEST:

Therese Calic
THERESE L. CALIC, DISTRICT SECRETARY

RESOLUTION NO. 2365

Appendix B

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE ESTERO MUNICIPAL IMPROVEMENT DISTRICT APPROVING A WATER SHORTAGE CONTINGENCY PLAN

ESTERO MUNICIPAL IMPROVEMENT DISTRICT

WHEREAS, Assembly Bill ABX1-11, signed by the Governor on October 13, 1991, requires that each California urban water supplier providing municipal water directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre feet of water annually must prepare and adopt a Water Shortage Contingency Plan as an adjunct to their Urban Water Management Plan; and

WHEREAS, the adopted Water Shortage Contingency Plan must be filed with the California Department of Water Resources within 30 days of adoption in order to ensure eligibility to receive drought assistance from the State; and

WHEREAS, within 30 days after such filing, the District must make the plan available for public review during normal business hours.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Estero Municipal Improvement District that:

1. The Estero Municipal Improvement District Water Shortage Contingency dated January 1993 has been prepared in accordance with all provisions of ABX1-11, has been reviewed at a properly noticed public hearing and is hereby adopted and shall be fully implemented within the next 30 days.

2. The District Secretary is hereby authorized and directed to attach a certified copy of this resolution to the Water Shortage Contingency Plan and to file a copy of the plan with the California Department of Water Resources.

3. The District Secretary is further directed to keep a copy of the Water Shortage Contingency Plan available for public review during normal business hours.

RESOLUTION NO. 2365

PASSED AND ADOPTED as a Resolution of the Board of Directors of the Estero Municipal Improvement District at the Regular Meeting held on the 1st day of March, 1993, by the following vote:

AYES: Directors Battaglia, Chinn, Field, Fitzgerald, and President Bramlett

NOES: None

ABSENT: None

ABSTAIN: None

OWEN BRAMLETT, PRESIDENT

ATTEST:

THERESE TYREE, DISTRICT SECRETARY

Appendix C

RESOLUTION NO. 2190

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE ESTERO MUNICIPAL IMPROVEMENT DISTRICT ESTABLISHING A METHODOLOGY FOR ESTABLISHING MANDATORY WATER RATIONING ALLOTMENTS AND CREATING AN EXCESS WATER USAGE PENALTY

ESTERO MUNICIPAL IMPROVEMENT DISTRICT

WHEREAS, the District Board has declared that a water emergency exists and that mandatory water rationing measures are to be implemented as set forth in Sections 8.60.010 through 8.60.130 of District Ordinance No. 107 ; and

WHEREAS, the following are defined for the purpose of this resolution:

Unit of water - 100 cubic feet or 748 gallons

Allotment - the amount of water a customer may use each month without having to pay an excess water usage penalty.

Excess Water Usage Penalty - a penalty charged for water consumed over a customer's allotment.

WHEREAS, the methodology for determining the allotments for each customer is as follows:

o For residential customers, allotments shall be based upon the estimated number of persons living in each unit. For each person, the base allotment shall be 55 gal/person/day.

Single-Family Dwelling (land use code 100) is 4 persons per dwelling unit and at 55 gal/day/person - 220 gal/day base usage allowed. In addition to the base usage, the following outside usage is allowed:

Units/Single Family Unit/Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	2	4	5	5	6	5	4	1	0

Duplex (land use code 200) is 3 persons per dwelling unit and at 55 gal/day/person - 165 gal/day base usage is allowed. In addition to the base usage, the following outside usage is allowed:

Same as Single-Family Dwelling

Town House (land use code 300) is 3 persons per dwelling unit and at 55 gal/day/person - 165 gal/day base usage is allowed. In addition to the base usage, the following outside usage is allowed:

No outside allocation. Resident must appeal to the Appeals Board. If approved, the same formula as single-family dwelling shall be applied.

Apartment/Condo (land use code 400) is 2.5 persons per dwelling unit and at 55 gal/day/person - 137.5 gal/day base usage is allowed. In addition to the base usage, the following outside usage is allowed:

Outside usage: Outside allotment calculated as: .0400 units/100 sq. ft./mo. with a monthly multiplier as follows:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	2	4	5	5	6	5	4	1	0

To appeal a base allotment, a residential customer is required to submit a written statement to the Appeals Board specifying reason for adjustment in allocation. An increase of an additional 40 gallons per extra person over the estimated number per land use code may be allowed.

- For all non-residential land uses and use codes 500 and greater, the allotment shall be determined as follows:

  Base allocation - The base consumption for each meter shall be determined by averaging its water consumption for the months of January, February, March, and December 1987. The allocation for each billing period will be 85 percent of the average consumption for the winter months listed above. This shall be the base allocation for each period.

  Outside allocation - Outside water is considered all water used above the base allocation for the months of April through November. The amount of water consumed over and above the base consumption during the months of April through November 1987 is determined by subtracting 85 percent of the base consumption from the amount of water consumed during each of the above described months. Each customer is allocated 40 percent of the outside consumption amount.

DISTRICT RESOLUTION NO. 2190

WHEREAS, an excess water usage penalty shall be implemented for all land use codes as follows:

Excess Water Consumption	Monetary Penalty
0% - 5% over allotment	.75 per unit
5.01% - 10.00% over allotment	2.32 per unit
10.01% - 20.00% over allotment	4.42 per unit
20.01% + over allotment	5.47 per unit

NOW, THEREFORE, BE IT RESOLVED as follows:

1. Mandatory water rationing shall become effective upon the Public Utilities Commission of the San Francisco Water Department's approving and adopting mandatory water rationing.

2. Allocations for each meter within the Estero Municipal Improvement District shall be calculated as described above.

3. An excess water usage penalty as described above shall become effective August 1, 1990, upon the Public Utilities Commission of the San Francisco Water Department's approving and adopting mandatory water rationing during the month of May, 1990.

4. The District Manager is hereby authorized to modify the above water allocations when and if deemed necessary.

PASSED AND ADOPTED as a Resolution of the Board of Directors of the Estero Municipal Improvement District at the regular meeting held on the 7th day of May, 1990, by the following vote:

AYES: Directors Battaglia, Fitzgerald, Martinson, Oliver, and President Chinn

NOES: None

ABSENT: None

ABSTAIN: None

DISTRICT RESOLUTION NO. 2190

ROGER CHINN, PRESIDENT

ATTEST:

RICHARD D. WYKOFF, DISTRICT SECRETARY
BY THERESE TYREE, DEPUTY DISTRICT SECRETARY

Appendix D

PROJECTED WATER ALLOCATIONS FOR A 53% REDUCTION FROM 1987
(in 100 cubic feet)

RESIDENTIAL

Land Use Code	Total Water Used 1987	Dwelling Units	Occupancy Factor (persons per dwelling)	Population	Inside Allocation Factor (gal/person/day)	Extra * Person	Inside Allocation Factor (gal/person/day)	Inside Allocation	Outside Usage 1987	New Outside Allocation	New Total Allocation
10 single family	867,196	4,512	4	18,048	45	857	40	413,036	290,511	29,051	442,087
20 duplex	3,914	40	3	120	45	8	40	2,791	1,311	131	2,922
30 townhouse	216,477	2,600	3	7,800	45	432	40	179,709	201,332	20,133	199,842
40 apt/condo	554,725	5,930	3	14,825	45		40	325,536	111,500	11,150	336,686
TOTALS	1,642,312	13,082		40,793				921,072	604,654	60,465	981,537

* Accounts for households with more than the assumed occupancy.

COMMERCIAL/INDUSTRIAL

Land Use Code	Total Water Used 1987	Inside Usage 1987	Inside Usage Factor	New Inside Allocation	Outside Usage 1987	Outside Usage Factor	New Outside Allocation	New Total Allocation
50 restaurant	20,537	18,832	67%	12,617	1,705	10%	171	12,788
60 irrigation	584,684	0	67%	0	584,684	10%	58,468	58,468
70 commercial	116,924	104,530	67%	70,035	12,394	10%	1,239	71,275
80 nonprofit	21,524	8,846	67%	5,927	12,678	10%	1,268	7,195
90 industrial	150,702	122,822	67%	82,291	27,880	10%	2,788	85,079
TOTALS	894,371	255,030		170,870	639,341		63,934	234,805

EMID TOTALS

	Total Water Used 1987	New Inside Allocation	New Outside Allocation	New Total Allocation	Total Allocation % of 1987
Residential	1,642,312	921,072	60,465	981,537	59.8%
Commercial/Industrial	894,371	170,870	63,934	234,804	26.3%
EMID TOTAL	2,536,683	1,091,942	124,399	1,216,341	48.0%

Appendix E

July 1, 1992

Dear Water Customer:

The Estero Municipal Improvement District (EMID) will continue to receive water allotments based on the formula established in May of 1990. Although rainfall in the Bay Area was normal this year, snowfall in the Sierras (where our water comes from) was well below normal. As of May 18, 1992, the San Francisco Water Department's (SFWD) reservoirs were at 41% of capacity. The current overall supply is comparable to that of 1991. This prompted SFWD to maintain current rationing measures for this year.

Due to the effectiveness of your water-saving efforts, some of the restrictions on the use of water have been eased. The following changes were approved on April 20, 1992:

- The landscape planting moratorium has been discontinued. New planting can now be installed. Drought tolerant landscaping is strongly encouraged. A guide on drought tolerant plant species that do well in this area is available from either the Foster City Public Works Department or Finance Department.
- Sprinkler systems can now be operated without continuous supervision.
- Permission to clean buildings, structures, walkways, sidewalks, driveways, patios, tennis courts, parking lots or other hard-surfaced areas can now be requested through the Water Appeals Board.

Also new for this year, a Water Conservation Program was adopted to assist EMID customers in saving water. The program offers rebates for customers who install water-saving devices such as ultra-low-flow toilets. The program will also distribute free water-saving devices to EMID customers including: low-flow showerheads and sink aerators, garden hose shutoff valves, and Mini-Flush toilet retrofit devices. Complete information and rebate applications can be obtained by contacting the Foster City Public Works Department.

Information is provided below which answers the most common questions people have including how your water allotment was calculated.

WHAT IS THE WATER ALLOCATION FORMULA?

Residential Customers

Inside Use - Residential customers will receive an allotment for inside usage based on the type of dwelling unit and an estimated occupancy for the type of unit as follows:

Type of Residence	Estimated Occupancy	Allotted gpppd*	Allotted gpd**	Allotted bupm***
Single Family Dwelling	4.0	55	220	8.8
Duplex	3.0	55	165	6.6
Town House	3.0	55	165	6.6
Condo/Apartment	2.5	55	138	5.5

* gpppd - Gallons Per Person Per Day
** gpd - Gallons Per day
*** bupm - Billing Unit Per Month (748 gallons = 100 cu. ft. = 1 billing unit)

Households with occupancies above those estimated may be given an additional allocation of 40 gallons per person per day upon approval by the Water Appeals Board. Customers who received an approval for an increase in occupancy, medical approval, or waiver of water use restrictions **DO NOT NEED TO FILE A NEW APPEAL**.

Outside Use – Residential customers will receive an additional allocation for an outside allotment based on the square footage of landscaping. The allotment will be 1.76 billing units (1,315 gallons) per year per 100 square feet of landscaping.

For single family, duplex, and town houses, the allotments are based on the average square footage of a representative sample of outside landscaping. Individual meters serving less than 200 square feet will not receive an outside allocation.

Single Family and Duplex – 32 billing units per year per dwelling unit as shown:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
bupm***	0	0	0	2	4	5	5	6	5	4	1	0
gpd**	0	0	0	50	100	125	125	150	125	100	25	0

Town House – 5 or 15 billing units per year per dwelling unit as shown:

Landscaping 200 – 500 Square Feet	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	bupm*** 0	0	0	0	.5	1	1	1	1	.5	0	0
5 Billing Units/Year	gpd** 0	0	0	0	12.5	25	25	25	25	12.5	0	0

Landscaping 501+ Square Feet	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	bupm*** 0	0	0	1	1.5	2.5	2.5	3	2.5	1.5	.5	0
15 Billing Units/Year	gpd** 0	0	0	25	37.5	62.5	62.5	75	62.5	37.5	12.5	0

Apartments and Condominiums – The outside usage allocation for apartments and condominiums is based on the actual square footage of landscaping. The allocation is 1.76 billing units per 100 square feet per year. This amount will be distributed in the months from April through November.

Non Residential Customers

Irrigation – Allocations will be based on the actual square footage of landscaping. The allocation is 1.76 billing units (1,315 gallons) per 100 square feet per year. This amount will be distributed in the months from April to November.

Recreation Buildings and Pools – Recreation buildings and pools in multifamily dwellings (i.e., town house condominium and apartment complexes) will receive an allocation based on 75% of their 1987 monthly water consumption.

Commercial/Industrial

Inside Allocation – The base consumption for each meter shall be determined by averaging water consumption for January, February, March, and December, 1987. The allocation for each billing period is 85% of the winter consumption.

Outside Allocation – An outside allocation is based on the actual square footage of landscaping served by each meter. The allocation is 1.76 billing units (approximately 1,315 gallons) per 100 square feet per year. This total allocation will be distributed in the months from April through November.

HOW DO I CALCULATE MY ALLOCATION?

The water bills will indicate what your allotment will be for the next billing period. To calculate your allocation, determine the number of days in the billing period and multiply that number by the gallons per day per person figure for your specific type of dwelling unit. (Please see table on Page 1.) This will provide you with your base allotment. The outside allotment is added to the base allotment for the total amount of water allocated for that billing period.

WILL THERE BE A PENALTY IF I EXCEED MY ALLOCATION?

Yes. The penalty is based on a sliding scale:

Excess Water Consumption	Monetary Penalty
0% – 5% over allotment	No Penalty
5.01% – 10.00% over allotment	3 x SFWD Rate*
10.01% – 20.00% over allotment	7 x SFWD Rate*
20.01% + over allotment	9 x SFWD Rate*

* The current San Francisco Water Department (SFWD) Rate is $.87 per billing unit.

HOW WILL WATER "BANKING" WORK?

- Unused portions of an allocation for a billing period can be carried over to the next billing period.
- Banked water can only be carried over to the NEXT billing period.
- Banked water cannot be used to offset penalties from prior billing periods.

WHAT ARE THE PROHIBITED USES OF EMID WATER?

This notice contains an insert listing the unlawful uses of water during mandatory water rationing. Please read the enclosed information carefully.

WHAT HAPPENS IF I VIOLATE THE WATER RATIONING ORDINANCE?

- Using water in excess of the customer's allotment is subject to penalties. Additionally, the District may require installation of a flow restrictive device on the water service line.

- Continued water consumption in excess of the allocation may result in discontinuance of water service by the District.

- A charge of $100.00 shall be paid prior to reactivating water service.

- Except as specifically stated elsewhere, any violation of the provisions of this Ordinance shall be punishable as an infraction, the penalty for which shall be as follows:
  1. A fine not exceeding $100.00 for a first violation.
  2. A fine not exceeding $200.00 for a second violation within one year.
  3. A fine not exceeding $500.00 for each additional violation within one year.

HOW CAN I FILE AN APPEAL OF THE WATER RATIONING RESTRICTIONS?

ALL APPEALS MUST BE FILED ON AN EMID APPEAL FORM which can be obtained from City Hall, 610 Foster City Boulevard, Foster City, CA 94404, or by calling (415) 349-1200, Ext. 17. An appeal must clearly state the basis for the appeal and the cause or reason why special consideration should be given by the Appeals Board. Appellants will be notified of the Board's decision by mail as soon as possible.

WHO CAN I CONTACT FOR MORE INFORMATION?

For more information regarding the District's water rationing program, contact the Public Works Department at (415) 349-1200, Ext. 58. A centralized information center has been established where a management representative will assist you with your water inquiries. For specific water billing questions, i.e., name and address change, new service information, disconnection notices, etc., contact the Finance Department at (415) 349-1200, Ext. 14.

Most EMID customers have responded well to the water emergency. Your efforts are recognized and appreciated. However, the drought is not over. WE CANNOT STRESS ENOUGH THE IMPORTANCE OF CONTINUING COMPLIANCE WITH THIS WATER RATIONING PROGRAM IN A COLLECTIVE EFFORT TO CONSERVE THIS PRECIOUS RESOURCE!

Sincerely,

Board of Directors
Estero Municipal Improvement District

Estero Municipal Improvement District
City of Foster City
610 Foster City Blvd.
Foster City, CA 94404

BULK RATE
U.S. POSTAGE
PAID
Permit Number
San Mateo, C.

MANDATORY WATER RATIONING - UNLAWFUL USES

District Ordinance Section 8.60.060 defines unlawful water uses for EMID customers. The following list summarizes those items which affect most of our customers.

A. **EXCESS WATER USE** - Use of water in excess of the allocation as specified by Resolution of the District Board.

B. **CAR WASHING** - Washing cars, boats, trailers or other vehicles with a hose unless the hose has a positive shut-off device.

C. **LAWNS** - Watering grass, lawn, groundcover, shrubbery, annual flowers/plantings, open ground, gardens, trees, or other vegetation in a manner that results in runoff into sidewalks, gutters and streets or during period of precipitation, or to an extent which allows excess water to run to waste.

D. **HOURS** - Watering grass, lawn, groundcover, shrubbery, annual flowers/plantings, open ground, gardens, trees or other vegetation during the hours of 10:00 AM through 6:00 PM on any day of the week.

E. **LEAKS** - Allowing or failing to attend to the escape of water through leaks, breaks, or malfunction within the water user's plumbing or distribution system for any period of time within which such leak, break or malfunction should reasonably have been discovered and corrected. It shall be presumed that a period of twenty-four hours after the water user discovers or is notified of such break, leak, or malfunction is a reasonable time within which to correct such condition or to make arrangement for correction.

F. **HOUSE OR SIDEWALK** - Cleaning buildings, structures, walkways, sidewalks, driveways, patios, tennis courts, parking lots or other hard-surfaced areas without prior approval of the Water Appeals Board.

G. **FOUNTAINS** - Operating, cleaning, flushing, filling or refilling of any ornamental fountain or body of water, unless there are extenuating circumstances as determined by the Appeals Board.

H. **COMMERCIAL CARWASH** - Operating a car wash unless water for such use is recycled.

I. **FIRE HYDRANTS** - Taking or using water from any fire hydrant unless specifically authorized by permit from the Appeals Board, except by legally constituted fire protection agencies for fire suppression purposes.

J. **POOLS AND SPAS** - Draining and then filling or refilling of any swimming pool or spa unless there are extenuating circumstances as determined by the Appeals Board.

K. **RESTAURANTS** - Serving water in restaurants except upon request by the customer.

L. Flushing fire hydrants and water mains unless there is an emergency as determined by the District Engineer.

M. Running water or washing with water that results in flooding or runoff in or on sidewalks, gutters and streets.

N. Excess watering of new planting or replanting of any water dependent landscaping including but not limited to any replacement, additional or new grass, lawn, groundcover, shrubbery, annual flowers/plantings, trees, gardens or other vegetation until such time as the District Board has determined that the water shortage emergency is over. The planting and replanting should be done in a manner which minimizes the amount of water required.

O. Using water for consolidation of backfill or dust control.

P. Any other use of water which is determined to be wasteful as determined by the District Engineer.

OUTDOORS Cont'd

20. **Plant drought-resistant trees and plants.**
Many beautiful trees and plants thrive without irrigation in the limited rainfall of our semi-arid region.

21. **Put a layer of mulch around trees and plants.**
Mulch slows the evaporation of moisture.

22. **Use a broom to clean driveways, sidewalks and steps.**
Using a hose wastes hundreds and thousands of gallons of water.

23. **Don't run the hose while washing your car.**
Soap down your car from a pail of soapy water. Use a hose only to rinse it off.

24. **Tell your children not to play with the hose and sprinklers.**
Children love to play under a hose or sprinkler on a hot day. Unfortunately, this practice is extremely wasteful of precious water and should be discouraged.

25. **Check for leaks in pipes, hoses, faucets and couplings.**
Leaks outside are easier to ignore since they don't mess up the floor or keep you awake at night. However, they can be even more wasteful than inside leaks especially when they occur on your main water line.

Foster City Public Works Department
(650) 286-8140

Appendix F

25 THINGS YOU CAN DO TO SAVE WATER